FORWARD (U)

(U) The University of Miami Acoustic Communication Studies project has been terminated without the sea evaluation recommended by both ONR and NOSC. Consequently, this final report is presented without any at sea performance data. Earlier experimental results and recent simulation data suggest the system would provide significant (~ 10dB) performance advantages relative to a comparable incoherent tonal system, but a side-by-side evaluation of the two systems proposed for the summer of 1979 was denied. The Navy's failure to evaluate the M7 system either independently or in comparison with the tonal system has been a disappointment to the author.

(U) Five papers have been bound together for this report. The first gives a brief overview of the system goals, techniques and capabilities. The second provides a detailed description of the signal format and receiver operation. In the third paper, the results of an extensive simulation of receiver operation under realistic operating conditions is presented. In the fourth paper, the hardware requirements for implementation of the system are described. Finally, the fifth paper comments on the coherence time results obtained by the Mobile Acoustic Communication Studies (MACS) project and their relevance to large time bandwidth product systems such as M7.